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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,215	01/02/2004	So-hye Kim	1793.1148	6657

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WASHINGTON, DC 20005

EXAMINER
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ZHU, RICHARD Z

ART UNIT	PAPER NUMBER
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2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/750,215	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Richard Z. Zhu	<b>Art Unit</b> 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/2/2004, 4/26/2005, 5/31/2995, 7/25/2005.

**DETAILED ACTION**

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on January 3, 2003, a second application filed in Korea on January 18, 2003, a third application filed in Korea on March 10, 2003, and a fourth application filed in Korea on April 7<sup>th</sup>, 2003. Certified copies of the four Korean Patent Applications had been received.

***Claim Objections***

2. The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

3. Claim 2 is objected to under 37 CFR 1.75(a) as failing to particularly pointing out the subject matters claimed.

Regarding Claim 2, Please define in either Claim 1 or Claim 2 the exact definition of "simple content".

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 8, 10, 11, 12, 18, 19, 20, 21, 22, and 24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Gabbe et al. (US 4928252 A)**.

Regarding Claim 1, **Gabbe et al. (US 4928252 A)** discloses a device with methods for printing a predetermined number of pages on a single sheet comprising [Column 3, Rows 18 through 46]:

- Setting a page up for printing by specifying the configuration of a page to be printed by page description language [Column 3, Rows 18 through 20].
- Determine the method of printing the page according to the predetermined parameter [Column 3, Rows 20 through 25].
- Processing and Printing the pages accordingly [Column 3, Rows 25 through 46].

Finally, in [Column 6, Rows 32 through 44], **Gabbe et al. (US 4928252 A)** clearly teaches that in default mode, each page will be printed on a single physical sheet whereas the user has the ability to override the default setting and define how many pages may be printed on a single physical sheet.

Regarding Claim 2, it is inherent that all pages have simple content therefore all pages to be printed in **Gabbe et al. (US 4928252 A)** have simple content.

Regarding Claim 10, regarding setting a printing environment, processing the data according to the printing environment, **Gabbe et al. (US 4928252 A)** clearly teaches steps for setting a printing environment and processing the data according to said environment in [Column 3, Rows 18 through 46] and means for printing the data according to the set environment [Column 4, Rows 1 through 5]. Regarding generating a number indicating the order of multiple printing, **Gabbe et al. (US 4928252 A)** teaches in [Column 11, Rows 5 through 27] and referring to Figures 7A through 7P that an integer between 0 and 7 are assigned to each page order.

Regarding Claim 11, **Gabbe et al. (US 4928252 A)** teaches default printing will print one page on one physical sheet and user can request a multiple printing at [Column 6, Rows 14 through 21], a mean for printing according to the set printing environment at [Column 4, Rows 1 through 4], the apparatus will determine the optimal layout once the user enter a value for N to multiple up printing [Column 6, Rows 48 through 54], whereas it is inherent that the page description language outputted by Application Program 20 contains information specifying position, font style, size, color, and transparency of the pages to be printed [Column 1, Rows 60 through 65].

Regarding Claim 18, **Gabbe et al. (US 4928252 A)** clearly teaches in [Column 6, Rows 14 through 21, Rows 45 through 50] that the user can specify the combination of pages to be printed on a single whereas it is inherent that the printer of **Gabbe et al. (US 4928252 A)** can determine whether or not the user had selected from a predetermined N or arbitrarily selected N since it is clear the system was designed not to be limited by a few predetermined combinations of pages per sheet [Column 6, Rows 45 through 50].

Regarding Claim 19 and 20, **Gabbe et al. (US 4928252 A)** clearly teaches in [Column 11, Rows 5 through 25] and Figures 7A through 7P a method to set a combination of and an arrangement in which the multiple up printing will be performed. Since the printer is not limited to a predetermined group of selected N, it is inherent that the method mentioned above also applied to those N that are pre-determined.

Regarding Claim 22, **Gabbe et al. (US 4928252 A)** clearly teaches that at default printing, all pages are to be printed one page per physical page [Column 6, Rows 32 through 35] unless the user overrides the default and sets the instruction to print multiple pages on a single physical medium. Therefore, it is inherent that the system is capable of processing data according to the setting of page to be multiple printed or not.

Regarding Claim 24, the subject matters claimed are an inherent feature of all modern printers, including the system of **Gabbe et al. (US 4928252 A)**.



Regarding Claims 8, 12, and 21, referring to Figure 1 of **Gabbe et al. (US 4928252 A)** and [Column 5, Row 43 through 56], the reference teaches a print symbiont 28 that receive and decode page description language from a application program 20 and issue corresponding commands according to settings and page description language to the print engine to print the pages to a desirable result.

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6. Claims 3, 4, 5, 6, 7, and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Kohri et al. (US 5959744 A)**.

Regarding Claim 3, **Kohri et al. (US 5959744 A)** clearly teaches a method to measure the amount of data on a page using main scan length and sub-scan length [Column 2, Rows 55 through 67] whereas in [Column 3, Rows 25 through 30] it clearly teaches that it is being compare to a predetermined reference amount base on the recording sheet. Regarding processing data to be multiple printed in response to amount data calculated, in [Column 5, Rows 61 through 68] **Kohri et al. (US 5959744 A)** clearly teaches that the pages are to be multiple printed when its parameters does not exceed a reference amount. Regarding process data to be commercially printed, in [Column 6 Row 63 through Column 7 Row 4] **Kohri et al. (US 5959744 A)** clearly teaches when the parameter exceeds a reference, normal printing is to be carried out [Column 7, Row 3].

Regarding Claim 4, **Kohri et al. (US 5959744 A)** clearly teaches grouping each page to be printed and setting N with respect to each group. In one scenario [Column 5, Row 61 Column 6 Row 8], it is determined that pages 1 through 3 does not exceed the reference and therefore N is set to 3 for that physical sheet and all 3 pages are set on that physical sheet. In yet another scenario [Column 6, Row 63 through Column 7, Row 3], it is determined that Page 2 exceeds the reference

amount, therefore Page 1 is set to one group with  $N = 1$  and Page 2 is set to a second group with  $N = 1$ .

Regarding Claim 5, **Kohri et al. (US 5959744 A)** clearly teaches in [Column 6, Row 8] and [Column 7, Row 3] the manner in which recording or printing is to be executed according to the  $N$  set for each group.

Regarding Claim 6, **Kohri et al. (US 5959744 A)** clearly teaches grouping the pages to be printed base on the main-scan and sub-scan length and compare this against a reference amount and process the data accordingly. See the prior art noted in the rejections of Claim 3, 4, and 5.

Regarding Claim 7, **Kohri et al. (US 5959744 A)** clearly teaches a scenario [Column 6, Row 63 through Column 7, Row 3] where the amount of data on a page to be printed exceed the reference amount, i.e. content too complicated to fit on the rest of the designated physical sheet, the  $N$  for that page to be printed is set to 1 and normal recording was carry out.

Regarding Claim 9, **Kohri et al. (US 5959744 A)** clearly teaches a Rom102 that stores a control program to control the operations of the printer system [Column 1, Rows 65 through 68].

Please note the fact that it is very well known in the art that the size of the page to be printed is determine based on the amount of the image data stored in memory, as taught by **Hashimoto et al. (US 5084760 A)** published on January 28<sup>th</sup>, 1992 [Column 2, Rows 34 through 38].

7. Claims 13, 14, 15, 16, and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Rourke (US 5191429 A)**.

Regarding Claim 13, **Rourke (US 5191429 A)** teaches a printing process comprising steps of determining the size of the image to be printed, the size of the paper to which the image is to be printed on, determining the optimal number of times the image can be printed on one physical page, and a single pass printing the image by the number of times designated on the page. Referring to Figure 7 and [Column 7, Rows 40 through 55], **Rourke (US 5191429 A)** teaches that the defaulting setting is set to print one image per page. Therefore, given the option of allowing the user to print the same image N times on a single page, it is inherent that the system can determine when to Multiple-Up print repetitions in response to user input.

Regarding Claims 14 and 15, **Rourke (US 5191429 A)** clearly teaches in [Column 7, Rows 25 through 40] that the number of images can be printed on a single physical sheet is determined by the size of the physical sheet. In addition, according to Figure 7 of the prior art whereas a "quantity" option is clearly present, allowing the user to determine how many times the image is to be printed and thereby making this an inherent functionality of the system.

Regarding Claim 16, base on the prior art teaching used to reject Claims 14 and 15, it is inherent that the system is capable of determining

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whether or not the user have selected to perform repetition printing as compare to its default mode of printing.

Regarding Claim 17, **Rourke (US 5191429 A)** teaches operating system software [Column 5, Rows 40 through 55] that can be uploaded or downloaded from memory to control the overall operation of the printer system.

***Conclusion***

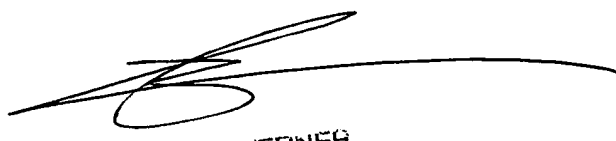
1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure JP 07-256975, JP 11-099722, JP 11-119955, JP 11-235489 (US 7095512 B1), JP 2001-206916, US 5768488 A are each pertinent as teaching Multiple-Up Printing using methods that can anticipate applicants' inventions. Of which, JP 07-256975, 11-099722 and 11-119955 were found in Applicants' IDS form. The examiner thanks the applicants for disclosing the related arts.

2. Acknowledgement is made that P1999-0031582 and P1999-021029, as disclosed in the IDS, has yet to be considered. A full translation of specifications is pending and they will be considered for the next office action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Supervisory Patent Examiner Brian P. Werner whose telephone number is 571-272-7401 and Assistant Patent Examiner Richard Z. Zhu whose telephone number is 571-270-1587. The examiners can normally be reached on M-F, 8:00 - 4:30.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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RZZ

2/6/2007